UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
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Colonel David L. Hansen
District Engineer
Norfolk District, Corps of Engineers
Fort Norfolk, 803 Front Street
Norfolk, Virginia 23510-1096

DEC 18 2001

Dear Colonel Hansen:

The Environmental Protection Agency (EPA) is currently reviewing information in support of a Corps of Engineers' proposal to expand an existing dredged material disposal site in southeastern Virginia. The Norfolk District Corps of Engineers (COE) has indicated that the Norfolk Harbor and Channels Eastward Expansion of Craney Island —Feasibility Study, currently being conducted, will determine the need for and the federal interest in an eastward expansion of the Craney Island Dredged Material Management Area (CIDMMA). This project is being coordinated with the Commonwealth of Virginia through the Virginia Port Authority (VPA).

The Craney Island Dredged Material Management Area (CIDMMA) is a 2,500-acre confined dredged material disposal site located near Norfolk, VA receiving 3-5 million cubic yards of dredged material annually. CIDMMA was constructed in 1956-1958 and is federally owned and operated. It is used by federal, state, and local governments as well as by private interests. CIDMMA was originally designed to have a capacity of 100-million cubic yards but due to compaction and implementation of intensive management techniques its capacity has been considerably increased. At the end of 1997 CIDMMA contained over 200-million cubic yards of dredged material. CIDMMA is authorized to handle all types of dredged material including material suitable and unsuitable for open ocean disposal.

As described by Congressional Resolution 2539 on Craney Island Virginia (signed September 24, 1997) and the COE, the objectives of the expansion project include:

1. Extending the useful life of the CIDMMA as a dredged material containment area.
2. Providing additional acreage for the development of projected long-term berthing and landside port facilities adjacent to the Norfolk Harbor Channel.
3. Providing a logistical and tactical area for support of the deployment of national defense forces.

As an agency with jurisdiction by law (i.e., Section 309 of the Clean Air Act and Clean Water Act) and with special expertise (e.g., marine and estuarine ecosystems) we intend to fully participate in the development of an environmental impact statement (EIS) for Norfolk Harbor and Channels Eastward Expansion of Craney Island project. Because scoping is such a critical step in defining the direction and intensity of the analysis process, EPA respectfully submits the

following comments in order to facilitate an efficient and effective NEPA process. Although the following list is exhaustive we intend to work with the Corps of Engineers, through the NEPA (National Environmental Policy Act) process, to identify the significant issues which should be analyzed in detail. We thank for the opportunity to participate in this process. If you have any questions regarding our comments please contact Regina Poeske of my staff at 215-814-2725.

Sincerely,

Thomas Slenkamp

Thomas Slenkamp, Acting Director
Office of Environmental Programs

Attachment

Norfolk Harbor and Channels Eastward Expansion of Craney Island – Feasibility Study
EPA Scoping Comments

In the resultant Environmental Impact Statement (EIS) the objectives of the feasibility study, the scope of decisions to be made (including analysis of alternatives), and the effects to be considered in the environmental analyses and document must be clearly identified. The following comments should help raise pertinent issues related to creation of additional dredged material disposal options and port facility development for your consideration in the EIS. Where applicable we will work with the COE and the NEPA team to identify and eliminate from detailed studies those issues which are not significant.

Purpose and Need

The document should describe the underlying problem (problem statement), the facts and analyses used to support the problem statement (including information about why in this particular location, at this particular time) and the context or perspective of the agency mission in relation to the need for action. For example, the basic problem appears to be lack of future capacity in the existing Craney Island Dredged Material Management Area (CIDMMA). The facts and analyses used to support this statement would include existing capacity at CIDMMA, existing and projected dredged material volumes from all sectors using CIDMMA, information documenting current management practices at CIDMMA, etc. The COE is responding to these problems because they have a mandate under Congressional Resolution (Resolution) 2539 as well as under separate authorities regarding dredging and disposal.

Additional issues noted in the objectives of the feasibility study include providing for additional acreage for the development of a port facility which could also serve for national defense purposes. Because it lies within the COE's scope of decisions to be made EPA considers the development of a port facility (and subsequent use for national defense) on the proposed eastward expansion of CIDMMA a connected action (as described under CEQ Regulations at 1508.25). As such it should be discussed in the same impact statement including, need for and alternatives to, development at this location. The purpose, need and development of these facilities is less well understood at this time, however, EPA believes it is incumbent upon the COE, in their EIS, to describe the underlying problems associated with port facilities in the area. The facts and analyses used should include a description of current port facilities in the Norfolk Harbor Channel and the projected lack of or deficiency in adequate port facilities in the area. This same type of information should also be included regarding current and projected needs for national defense deployment.

Furthermore, the Resolution directs the COE to give specific attention to rapid filling which appears to conflict with the primary purpose of an expansion of CIDMMA. This conflict between project objectives needs to be clearly articulated and understood in order for the public and decision maker to fully understand the scope of decisions to be made.

The Purpose and Need Section of the EIS should also establish a clearly defined time frame for addressing the problems. When will CIDMMA reach full capacity? What is the planning

horizon for dredged material management in the Norfolk Harbor Channel? Please define "useful life" as directed by the Resolution. What time frames exist for the port facility developers and those planning for national defense concerns? How do these time frames overlap or conflict?

Alternatives

The Alternatives Analysis Section must analyze all reasonable and feasible alternatives to the proposed project, including the No Action alternative. An alternative is considered reasonable and feasible, if it is practical in the technical, economic and social sense, even if it outside the jurisdiction of the lead agency (CEQ regulations at section 1502.14). Alternatives must meet the defined objectives and fulfill the need for action. A potential conflict with local or federal law does not necessarily render an alternative unreasonable, although such conflicts must be considered [Section 1506.2(d)]. Alternatives that are outside the scope of what Congress has approved or funded must still be evaluated in the EIS if they are reasonable, because the EIS may serve as the basis for modifying the Congressional approval or funding in light of NEPA's goals and policies. Section 1500.1(a).. In determining the scope of alternatives, the emphasis is on what is "reasonable" rather than on whether the proponent or applicant likes or is capable of carrying out a particular alternative (NEPA's Forty Most Asked Questions, 1981). Any alternative raised and then discarded from detailed study must be identified and the rationale for elimination briefly discussed.

Current COE documentation indicates that the following are being considered as feasible alternatives:

- expansion of CIDMMA (options include east, west, north or combinations of these)
- placement of material at other confined sites
- ocean placement of suitable material
- demand reduction by alternative beneficial uses of dredged material
- combination of dredged material management plans
- evaluation of existing CIDMMA for possible joint use as a containment area and container port
- evaluation of use as a defense logistics and tactical support area
- no action alternative

EPA would add to this list the possibility of raising the berms at CIDMMA to increase capacity, alone or in conjunction with other alternatives mentioned above. Also, because the Congressional Resolution directs the COE to "give specific attention to rapid filling" of the proposed eastern expansion "to accommodate anticipated port expansion" EPA believes that the COE is required to consider alternatives to port development at the proposed expansion site. This would include port development elsewhere within a prescribed geographic area and the No Action alternative (no port development at eastward expansion site). This analysis is critical since it could show that eastern expansion is preferable for extending the useful life of CIDMMA while port development is accommodated elsewhere.

Affected Environment

This section of the EIS should describe the affected environment in terms of the physical. biological, cultural and socioeconomic resources that would be impacted by the proposed alternatives and the No Action alternative. Examples of affected environment for the expansion options include CIDMMA proper, the open and shallow water areas where the expansion will occur and areas directly and indirectly affected by the proposed expansions (e.g., Elizabeth River, Nansemond River, etc). Ocean disposal options include the area of direct disposal, adjacent areas indirectly affected and any areas that would be affected by transport of the dredged material. This list is expansive, however, EPA recognizes that the resultant EIS should focus on the issues that are truly significant and important in terms of decisions to be made.

A. **Physical Resources Section** should provide a description of the physical environment at the proposed project site including:

1. Substrate - This section should describe the existing aquatic ecosystem substrate at project areas associated with each alternative. Aquatic ecosystem substrate is considered to be the benthic material underlying all open water areas and constitutes the soil-water interface of wetlands. It is distinguished from soils by permanent inundation.

2. Water Quality - Describe existing physical and chemical water quality of surface waters in the project areas, including affected stream and rivers if applicable. These characteristics include salinity gradients, suspended particulates/turbidity, temperature, nutrients, dissolved gas levels and pH.

3. Hydrology - Describe the existing surface water or groundwater hydrology in the project areas. These characteristics include current patterns, and normal water fluctuations/tidal patterns (daily, seasonal and annual tidal and flood fluctuations) as described in the Virginia Institute for Marine Science (VIMS) models.

4. Groundwater Resources - Describe groundwater resources at each project site or within areas that could be impacted by project development.

5. Soil and Mineral Resources - Describe soils and mineral resources located within the project areas.

6. Air Quality - Identify existing air quality in the vicinity of the project areas.

B. **Biological Resources Section** should provide a description of the biological environment at the proposed project sties.

1. Endangered, Threatened or Sensitive Species - Section should provide a listing of all state or federally listed endangered or threatened species or sensitive species (or any candidates for listing) which could be affected by implementation of project alternatives. This should also include critical habitat identification.

Critical habitat is defined as (1) the specific areas within the geographical area occupied by a species, at the time it is listed, in accordance with provisions of section 4 of the Endangered Species Act (ESA), on which are found those physical or biological features (a) essential to the conservation of the species and (b) which may require special management considerations or protection; and (2) specific areas outside the geographical area occupied by the species at the time it is listed in accordance with the provisions of section 4 of the ESA, upon determination of the Secretary (of the Interior) that such areas are essential for the conservation of the species. Critical habitats are described in 50 CFR Parts 17 or 226.

2. Fish and Invertebrates - Section should list the fish and invertebrates and other aquatic organisms in the food web that may be affected by the implementation of the proposed alternatives. Aquatic organisms in the food web include fin fish, crustaceans, mollusks, insects, annelids, planktonic organisms and plants and animals on which they feed and depend on for their needs. All forms of life stages throughout its geographic range should be included in this category. Data should be presented describing the type, composition and ecological value of the resource. Information related to Essential Fish Habitat (EFH) in the area should also be included. EFH for federally managed fish species is defined as "those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity."

3. Other Wildlife - Section should identify wildlife that may be affected by the implementation of the proposed alternatives which are not addressed in the Endangered, Threatened or Sensitive Species Category or the Fish and Invertebrates Category. Game and non-game species (resident and transient mammals, birds, reptiles and amphibians) should be identified. Data should be presented describing the type, composition and ecological value of the resource.

4. Terrestrial Ecosystems - This section should identify terrestrial habitat that may be affected by the implementation of the proposed alternatives. If pertinent, data should be presented describing the amount, type, composition and ecological value of the resource and the relative rarity of the ecosystem on a national, regional and local level.

5. Sanctuaries and Refuges - This section should identify any sanctuaries or refuges which could be affected by the implementation of proposed alternatives. For the purposes of this analysis, sanctuaries and refuges are defined as areas designated under federal, state or local authority to be managed principally for the preservation and use of fish and wildlife resources.

6. Wetlands and Vegetated Shallows - This section should identify, delineate and describe the wetlands and vegetated shallows which could be affected by implementation of the proposed alternatives. Data should be presented characterizing the amount, type, composition (pattern diversity) and ecological value of the resource and the relative rarity of the ecosystem on a national, regional and local level.

Wetlands are defined as areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.

Vegetated shallows are defined as permanently inundated areas that under normal circumstances support communities of rooted aquatic vegetation, such as submerged aquatic vegetation (SAV). The recent decline in SAV areas in the bay should be noted and areas of historic and current communities should be noted for the lower James, Nansemond and Elizabeth River systems as well as Hampton Roads and lower Chesapeake Bay area.

7. Mudflats - This section should identify any mudflat areas that may be affected by the implementation of the proposed alternatives. Mudflats are broad, flat areas along the coast, in coastal rivers to the head of tidal influence, and in inland lakes, ponds and riverine systems. Tidal mudflats are typically exposed at low tides and inundated at high tides with water at or the surface of the substrate.

C. Socioeconomic and Cultural Resources Sections should address the proposed alternatives potential effects on human use characteristics as defined under Clean Water Act 40 CFR 230.50 to 230.54 and Section 106 of the National Historic Preservation Act of 1966 (16 U.S.C. 470(f)) which requires that the head of any Federal agency having direct or indirect jurisdiction over a proposed Federal or federally assisted undertaking in any State, take into account the effect of the undertaking on any district, site, building, structure, or object that is included in or eligible for inclusion in the National Register of Historic Places (see generally 36 CFR sec 800). If applicable, the existence of submerged historical resources should also be noted.

Land use and watershed characteristics should be described for each alternative. The number of homes, commercial businesses and industrial developments that may be impacted by project implementation should be described. This section should also describe any communities of concern related to Executive Order 12898 "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations".

Environmental Consequences

The Environmental Consequences Section should be devoted largely to scientific analysis of the direct, indirect and cumulative impacts of the proposed actions and of each of the alternatives as well as the No Action alternative. This section provides the analytic basis for the comparison of alternatives in the EIS. This analysis should include impacts related to expansion of CIDMMA, operation and maintenance of the new cell, dredging related to rapid filling of eastern expansion, ocean disposal, beneficial use placement, operation and maintenance of the new port facility, impacts related to berthing of ships at this facility, and any other anticipated impacts related to project implementation.

This section of the document is needed to draw hard conclusions regarding the loss of aquatic and potentially wetland ecosystems. This section should discuss these losses on a direct, indirect and cumulative basis. The document should discuss what these impacts mean for the larger ecosystems of the Elizabeth, lower James, and Nansemond River ecosystems, Hampton Roads, the Chesapeake Bay, the Commonwealth of Virginia and the mid-Atlantic Region.

The environmental effects related to the implementation of each alternative should be described

in the following categories:

A. Physical Resources (as described above)
B. Biological Resources (as described above)
C. Cultural Resources (as described above)
D. Socioeconomic Resources (as described above)
E. Unavoidable and Adverse Environmental Impacts
F. Irreversible and Irretrievable Commitments of Resources
G. Relationship Between Short-Term Uses of Man's Environment and the Maintenance and Enhancement of Long-Term Productivity

A. Physical Resources

1. Substrate - This section should identify the potential impacts, individual and cumulative, of each alternative on aquatic ecosystem substrate. Consideration should be given to any potential changes in substrate elevation and bottom contours, including changes outside the disposal site that may occur as a result of erosion, slumpage, or other movement of the discharged material.

2. Water Quality - This section should evaluate the potential impacts to surface water quality from the implementation of the proposed alternatives; include severity of any impacts, magnitude of any water quality changes, and relative probability that there would be an impact. Impaired waters [as described by CWA section 303(d)] and sources of impairment should be described for all project areas.

Impact assessment should also include a thorough description of the anticipated water quality impacts related to CIDMMA discharge. It should be noted that a Virginia Pollution Elimination Discharge System (VPDES) permit may required for the expansion site if new discharges are proposed for the Hampton Roads estuary.

Particular attention should be given in this section to:

- dissolved oxygen content
- turbidity
- nutrients
- toxic pollutants
- development of pool habitats for water-borne vectors, primarily mosquitos

3. Hydrologic Impacts - Hydrologic impact analysis should include the potential environmental impacts of each proposal on surface water or groundwater hydrology, with particular attention to the Elizabeth River system. The nature and degree of effect that the proposed project will have individually and cumulatively on water current patterns, circulation including downstream flows and normal water fluctuations.

4. Groundwater Resources - This section should evaluate the impacts, if any, to groundwater quality and quantity related to project implementation.

5. Soil and Mineral Resources - This section should describe the impacts to soil and mineral resources from project implementation including prime agricultural soils, if applicable.

6. Air Quality - This section should describe the impacts of each alternative on air quality. Impacts should address construction and operation impacts as well as impacts related to operation of the port facility.

B. Biological Resources

1. Threatened and Endangered Species - This section should address the potential for impacts to state or federally listed endangered or threatened species, or other sensitive species including sensitive habitat types. This section should include an evaluation of the loss of biodiversity in the immediate area as well as the state of Virginia.

2. Fish and Invertebrates - This section should address the potential for impacts to fish and invertebrates and other aquatic organisms in the food web. Impacts to resident, anadromous and catadromous fishes should be evaluated including all life cycles and habitat requirements; spawning, nursery, feeding and shelter. Loss of benthic food organisms and production export needs to be evaluated in detail. This section should include an evaluation of the loss of biodiversity in the immediate area as well as the state of Virginia. Also include impacts related to EFH.

3. Other Wildlife - This section should evaluate potential impacts to wildlife species not addressed in the Threatened, Endangered and Sensitive Species and Fish and Invertebrate Section. If applicable, evaluate the loss or change of breeding and nesting areas, escape cover, travel corridors and preferred food sources for resident and transient species. This section should also include an evaluation of the loss of biodiversity in the immediate area as well as the state of Virginia.

4. Terrestrial Habitat - If applicable, this section should evaluate the consequences associated with the loss of terrestrial habitat. This section should include an evaluation of the loss of biodiversity in the immediate area as well as the state of Virginia.

5. Sanctuaries and Refuges - This section should evaluate the potential impacts to sanctuaries and refuges as a result of project implementation. Evaluate the loss or change of breeding and nesting areas, escape cover, travel corridors and preferred food sources for resident and transient species.

6. Wetlands and Vegetated Shallows - This section should evaluate the consequences of losing wetlands and vegetated shallows as a result of project implementation. Impacts should assess not only acreages but the relative permanence of the impact and the function and value of the areas to be impacted. The analysis should include the value of these habitat types in the estuary or watershed, in the region or the Chesapeake Bay watershed. This section should include an evaluation of the loss of biodiversity in the immediate area as well as the state of Virginia.

The assessment should evaluate the adverse impacts to the biological productivity of the wetlands or shallows, reduction or elimination of nutrient exchange, and the loss of habitat (spawning, nursery, feeding and shelter).

7. Mudflats - This section should evaluate the potential impacts to mudflats identified at each alternative site. Impact assessment should include loss of foraging and nursery areas for fish and other wildlife.

C. Cultural Resources - Potential direct and indirect impacts to known cultural resources within the project area should be discussed in this section.

D.Socioeconomic Resources

1. Municipal and Private Water Supplies - Describe the potential for alternatives to negatively or positively affect water supplies for the area based on quality and quantity criteria.

2. Recreational and Commercial Fisheries - This section should address the potential for impacts (direct or indirect) to recreational and commercial fisheries as a result of project implementation.

3. Water Related Recreation and Aesthetics - This section should describe the potential positive and negative impacts to water-related activities and aesthetics of the area as a result of project implementation.

4. Parks and Preserves - This section should identify the potential impacts to parks and preserves which would result from project implementation. Parks and preserves are described as areas designated under Federal and State laws or local ordinances to be managed for their aesthetic, educational, historical, recreational or scientific value.

5. Land Use - This section should identify the potential impacts to existing and future land use patterns in the project area. This assessment should include impacts related to operation of a port facility or operations for national defense.

6. Noise - This section should describe the noise impacts of each project alternative, including impacts related to operation of the port and operations for national defense.

7. Other Socioeconomic Impacts - This section should describe the degree to which the proposed project will impact residential homes, commercial businesses and industrial developments by displacement, increased/decreased property values etc.. Also include the likelihood of secondary development as a result of project implementation (i.e., increased industrial development and infrastructure related to port facility). This section should also describe any impacts to communities of concern under Executive Order 12898 "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations".

E. Indirect/Secondary Impacts - Indirect impacts are defined as those impacts that are likely to occur later in time or in a different location as a result of the proposed action. Indirect impact

analysis requires identifying the indirect cause-effect relationships between the proposed actions and secondary actions and assessing the effects of the secondary actions on the environment. All factors influencing the secondary actions should be considered in the analysis.

The analysis of the secondary impacts should include noise, air quality, soil erosion, increased stormwater runoff, habitat loss, etc. related to development of all feasible alternatives and including development of a port facility at CIDMMA. Landside infrastructure improvements including rail spurs, new and improved roadways or interchanges should also be described and their impacts evaluated and disclosed in the EIS.

Indirect impacts include reduction in the diversity of the benthic population, impacts associated with support facilities for the port (roads, parking lots, etc), changes in property values, and changes in land use from increased development due to project construction. If applicable, impact assessment should include but not be limited to adverse impacts to wetlands, fish and wildlife resources, air quality, water quality, agricultural resources, socioeconomic resources and human health.

G. Cumulative Impacts - Cumulative impacts are defined as effects resulting "from the incremental impact of the action when added to other past, present and reasonably foreseeable future action regardless of what agency or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time." (40CFR1508.7).

For shallow water areas and benthos, the historic loss of these important resources in the Hampton Roads estuary, the Chesapeake Bay and Virginia needs to be recognized. When Craney Island was originally constructed in Portsmouth, VA it filled approximately 2500 acres of open water and presumably shallow water habitat in the Hampton Roads estuary. This impact, coupled with the proposed loss of benthic habitat, needs to be discussed and these losses recognized on a regional, and Bay-wide scale.

The cumulative impacts of the proposed projects at CIDMMA in conjunction with the impacts related to the proposed Hampton Roads Crossing need to be assessed particularly for physical and biological resources.

H. Mitigation - CEQ Regulations at Sec. 1508.20 describe mitigation as follows. "Mitigation" includes:

(a) Avoiding the impact altogether by not taking a certain action or parts of an action.
(b) Minimizing impacts by limiting the degree or magnitude of the action and its implementation.
(c) Rectifying the impact by repairing, rehabilitating, or restoring the affected environment.
(d) Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action.
(e) Compensating for the impact by replacing or providing substitute resources or environments.

The mitigation measures discussed in an EIS must cover the range of impacts of the proposals. The measures must include such things as design alternatives that would decrease the footprint of an alternative, possible land use controls that could reduce the need for dredging, and compensation alternatives that could include a range of restoration efforts targeting the Hampton Roads estuary and the Chesapeake Bay. All relevant, reasonable mitigation measures that could improve the project are to be identified, even if they are outside the jurisdiction of the lead agency. This will serve to alert agencies or officials who can implement these extra measures, and will encourage them to do so. Because the EIS is the most comprehensive environmental document, it is an ideal vehicle in which to lay out not only the full range of environmental impacts but also the full spectrum of appropriate mitigation. However, to ensure that environmental effects of a proposed action are fairly assessed, the probability of the mitigation measures being implemented must also be discussed. Thus the EIS and the Record of Decision should indicate the likelihood that such measures will be adopted or enforced by the responsible agencies (NEPA's Forty Most Asked Questions, 1981).